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Monthly Statistical Report

Prepared by the Finance, Accounting, and Statistics Department

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NOVEMBER 1988

SUMMARY

Imports in November exceeded October's recent-year record, while total deliveries experienced one of the largest jumps so far this year and crude oil production appeared to be declining at an increasing rate.

Deliveries rose more than 1.3 million B/D, or 8.1 percent, compared with a year ago, with all major products, as well as the "other oils" category, experiencing above-average increases. Similar surges in deliveries have occurred in the past, when, just as recently, purchases have apparently been spurred by signs of reversal in a downward price trend.

Gasoline deliveries rose 3.6 percent in November. Combined with a similarly large rise for October, the increase lifted year-to-date deliveries growth to an even 2.0 percent, closer to estimated consumption growth than had been the case a few months ago. Distillate deliveries' increase of 7.3 percent was greater than would have normally been expected, and residual fuel oil, kerosine jet fuel, and "other oils" all experienced gains of 10 percent or more. Residual fuel oil's substantial 16.7 percent increase, related to fuel switching and likely buying for inventory, followed on the heels of another sizeable increase for October, but kerosine jet fuel's more than 14 percent rise reversed a decline for the previous month related to unusual deliveries patterns a year ago. Strong petrochemical feedstock demand continued to bolster deliveries of "other oils".

November's year-to-year decline in domestic crude oil production, at 361 thousand B/D, was the largest so far this year. In Alaska, production has been steady since the coming on stream of the Endicott field about a year ago, while the decline rate of lower 48 production appears to have become more rapid with this year's lower crude oil prices.

Imports, which in October had already reached the highest level since 1980, rose to nearly 8 million B/D in November. The month's high imports, though partially augmented because of the availability of attractively priced crude on world markets, reflected more than the escalation of OPEC production in recent months. Mirroring the growth in demand and decline in domestic production over the past three years, imports for the first eleven months of this year combined have averaged the highest since 1980 as well. November's product imports were the highest for the month since 1974, with strong showings for all major products.

Input to distillation units rose a little over 1 percent from last November, though with the strong deliveries of gasoline in the past two months and delayed turnarounds at some refineries, product slates were tilted towards gasoline more than usual for this time of year.

Despite the month's high imports, November's total inventories fell by 5 million barrels, contrasting with a typical seasonal rise of about 10 million barrels and continuing the pattern of the past several months. Distillate stocks held steady, ending the month at close to those of a year ago. Even with the month's strong deliveries, record imports of gasoline and components and continued refinery emphasis on gasoline production lifted gasoline stocks by nearly 5 million barrels.

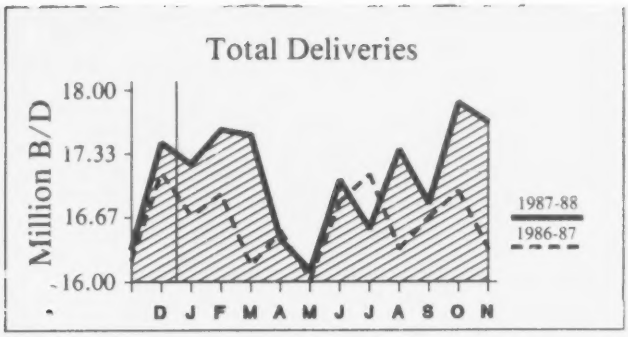
PRODUCT SUPPLIED[1/]

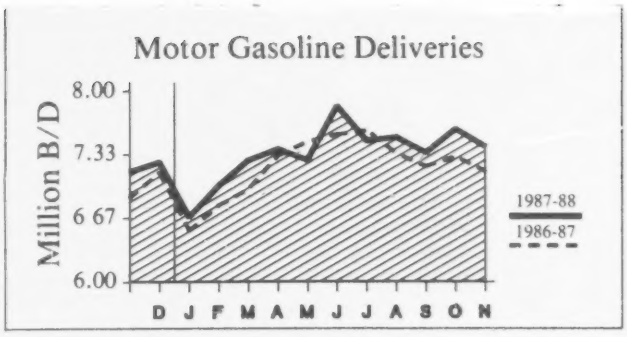
Gasoline

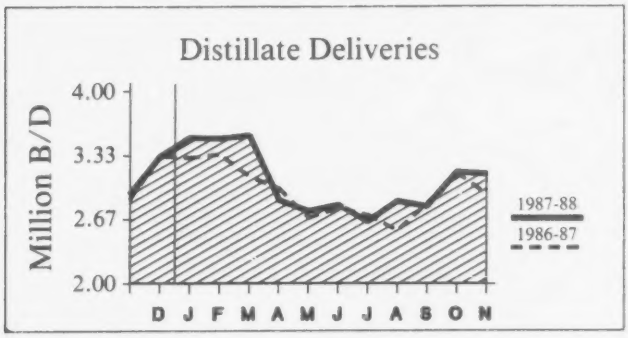
SECOND STRONG GAIN IN A ROW. Nearly repeating October's unusually large increase, November's gasoline deliveries rose 3.6 percent from a year ago. These recent gains, following a period of slower deliveries increases, have pushed the year-to-date rise in gasoline deliveries to an even 2.0 percent over a year ago, more in line with estimated consumption growth and helping to fade the apparent discrepancy between the two.

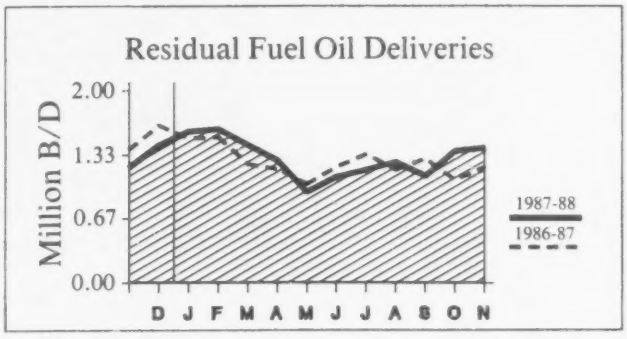
API ESTIMATES

	NOVEMBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.7	8.1	17.1	3.1
Crude oil production[2/]	8.0	(4.3)	8.1	(2.6)
Total imports[3/]	8.0	14.1	7.1	8.0
Stocks (million bbl)[3/]	1,057	(3.6)	na	na









In fact, while deliveries have been picking up, travel growth may be moderating, but only slightly. Increases in vehicle miles traveled, which had been averaging 3.7 percent through July, in more recent months have slowed to a little more than 3 percent. The slowing shows an apparent correspondence with the rate of growth in the economy, which, according to Commerce Department data, has been moderating as well.

Distillates

BUYING BEYOND CURRENT NEEDS APPARENT. After a weak October, November's distillate deliveries rose 7.3 percent, year to year. With temperatures 8 percent warmer than normal and slightly warmer than last year, the month's strong increase can hardly be attributed to cold weather. More likely, some distributors and end users moved to take advantage of the recent months' decline in prices, which appeared to be bottoming out.

Though still increasing, year to year, truck and rail traffic have both shown signs of moderating growth in recent months. We estimate that truck traffic growth has slowed to about 5 percent; rail traffic, which had averaged over 8 percent growth in the first half, has more recently been running about 3 percent. Since transportation usage has been one of the main contributors to distillate consumption's growth this year, the slowing in traffic growth indicates that overall consumption growth may have slowed as well, to roughly 3 percent.

Residual Fuel Oil

DELIVERIES RISE ALMOST 17 PERCENT. Deliveries of residual fuel oil are estimated to be 1,406 thousand B/D, an increase of 2.4 percent from last month and 16.7 percent from November 1987. The year-to-year increase, though less than October's inventory-related surge, reflects the maintenance of the recent strength in heavy fuel oil markets.

Electric utilities are reported to have increased their purchases of heavy fuel oil and are believed to account for much of the month-to-month increase in total residual fuel oil deliveries. As in the past few months, heavy fuel oil's price advantage apparently led to an increase in its share of the electric utility market relative to natural gas, more than compensating for the effects of a warmer-than-average November. Industrial demand is believed to have maintained its recent strength but not to have contributed substantially to the overall increase in residual fuel oil deliveries.

Bunker fuel deliveries were reported to have increased slightly from levels of last month, buoyed by seasonally high grain shipment activity in the Gulf Coast. East Coast deliveries were thought to have maintained their previous levels of activity.

Kerosine Jet Fuel

NOVEMBER REVERSES OCTOBER'S DECLINE. Year-to-year comparisons for kerosine jet fuel deliveries have fluctuated markedly between October and November of this year, due partly to unusual deliveries patterns last year. November's increase of 14 percent contrasted with a decline for October, but for the two months combined the deliveries increase has averaged about 5 percent—roughly in line with recent growth in miles flown.

Though air traffic growth is still less than at the beginning of the year, there appears to have been a slight up-tick in traffic growth in more recent months. After running at about a 3 percent rate during early summer, more recent increases are estimated at about 4 percent.

This year's lower growth in miles flown is largely the result of slower growth in passenger traffic. In fact, were it not for the effects of the lower dollar on international travel, revenue

passenger miles would have shown little if any increase this year. Higher fares account for some of this moderating growth in passenger traffic, with revenue per passenger mile so far this year up about 8 percent over a year ago. Though, after accounting for inflation, this amounts to only about a 4 percent real increase, it contrasts with recent previous years; revenue per passenger mile rose only about 2 percent last year, and had declined about 6 percent the year before.

Other Oils

CHEMICAL DEMAND CONTINUES TO SPUR DELIVERIES.

Deliveries of other oils are estimated to be 4,425 thousand B/D, representing a decline of 0.8 percent from last month but a 10.1 percent increase from November 1987. The decline from last month, however, is smaller than the seasonal norm because of unusually robust deliveries in petroleum feedstocks and asphalt and road oil, all of which are believed to have contributed to the substantial year-to-year increase.

As in the past several months, deliveries of petrochemical feedstocks are believed to account for the bulk of the increase in other oils deliveries. Because of the high demand for olefins, imports of petrochemical feedstocks are also reported to have increased substantially, and some other petrochemical plants which had been idle for several years are reported to have started resuming production recently. In particular, naphtha and butanes are reported to have registered sizeable increases in deliveries as ethylene feedstocks. However, market conditions are reported to have caused some product switching. Because of their favorable economics, ethane-propane mixtures are believed to have increased their share of the olefin market, displacing small quantities of purity ethane. Natural gasoline, with its high benzene and toluene content, has reportedly become more attractive at the expense of propane, whose deliveries are also believed to have declined slightly. In addition, the milder-than-average weather is also believed to have contributed to the slight decrease in propane deliveries.

Asphalt and road oil deliveries were reported to have been unusually strong during the month. The warmer weather is thought to have stimulated road building activity and maintenance that had been deferred from last month, especially in the Northeast, contributing to the sizeable year-to-year increase in other oils deliveries as a whole.

SUPPLY [1/]

Production

CRUDE OIL'S DROP LARGEST FOR YEAR.

Domestic crude oil production fell 361 thousand B/D, or 4.3 percent, in November compared with a year ago, the largest decline so far this year. Partly responsible for the larger apparent decline was that, unlike past months, there was essentially no year-to-year increase in Alaskan production in November. These increases, however, mainly resulted from comparisons against Alaskan production before the Endicott field came on stream late last year. In fact, Alaskan production has been essentially flat since that time, hovering near 2 million B/D.

While Alaskan production has been level so far this year, sagging crude oil prices appear to have enlarged the decline trend in lower 48 production. A trend fitted to last year's production shows an average annual decline rate of about 3.8 percent, or roughly 240 thousand B/D per year. For the first eleven months of this year, even allowing for temporarily depressed offshore production in September because of hurricanes off the Gulf Coast, the decline trend measures above 5 percent or 320 thousand B/D per year.

Imports

NOVEMBER EXCEEDS RECENT-YEAR RECORD.

Exceeding the recent-year record set in October, total imports in November rose to nearly 8 million B/D. Crude oil imports were strong, and product imports rose to the highest November level since 1974. Part of the recent surge in imports can be attributed to the ready availability of crude at reduced prices because of increased OPEC production in the past several months.

But because of the steady rise in demand and declining domestic production, imports for the first eleven months as a whole have also set a recent-year record. The 7.1 million B/D imported so far this year has been the highest since 1980. In the past three years, imports have grown by 2.2 million B/D, with increasing demand accounting for about two thirds of the increase and declining domestic production accounting for most of the remainder.

As in October, a major portion of the increase in November's imports was in the form of products. Imports of gasoline and components reached a new high of 630 thousand B/D for the month, up about 80 thousand B/D from a year ago. Distillate and residual fuel oil imports were also strong, helping to counterbalance the year-to-year decline in refinery production resulting in part from delayed turnarounds in progress during November. Distillate imports rose nearly 140 thousand B/D from a year ago, while residual fuel oil imports rose more than 160 thousand B/D.

Refinery Operations

PRODUCT SLATE TILTED TOWARDS GASOLINE.

Input to distillation units rose 1.3 percent in November over a year ago, though some refineries were undergoing turnarounds delayed from earlier in the season. The delayed turnarounds were reflected in the product slate, which was still tilted towards gasoline more than usual for November in response to strong deliveries of that fuel in the past two months. Gasoline production for the month rose 1.5 percent over last November's, while distillate and residual fuel oil output declined by 4.4 and 2.5 percent respectively.

November's refinery utilization rate of 83.2 percent was up nearly a point from last year. As frequently noted here, this

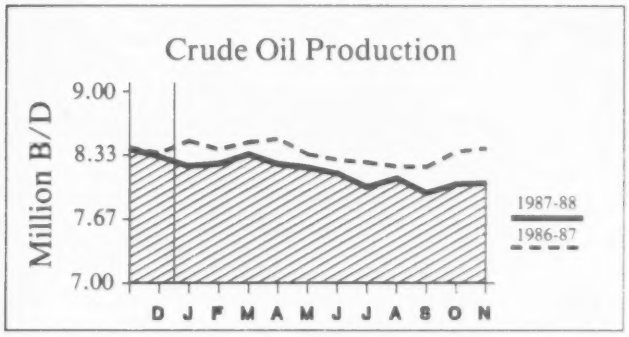
rate is calculated on the basis of operable capacity, including capacity not in actual operation. This idle capacity has been running at about 1 million B/D this year, down from as much as 2 million B/D in the early 1980s. As a percent of capacity in actual operation, the month's utilization works out to a rate in the high 80s—for a month which has traditionally been an off-peak period for refinery activity.

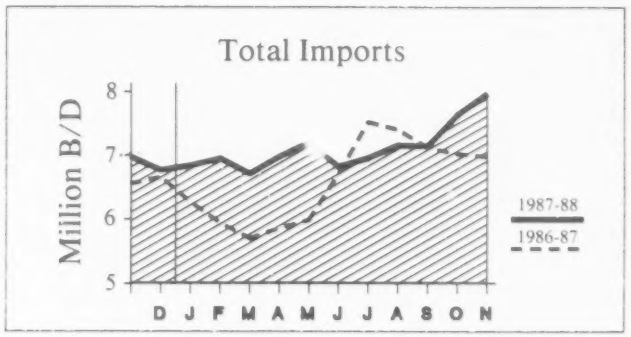
Inventories

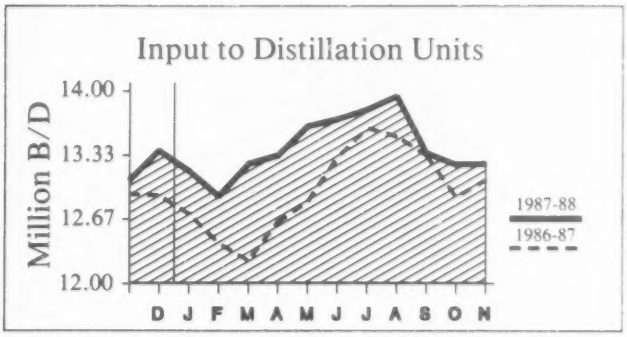
STOCKS CONTINUE THEIR DECLINE. Despite November's high imports, strong deliveries led to a contraseasonal, 5 million decline in total stocks for the month. Since July, inventories have fallen about 18 million barrels, and after accounting for typical seasonal patterns, the drop amounts to more than 50 million barrels.

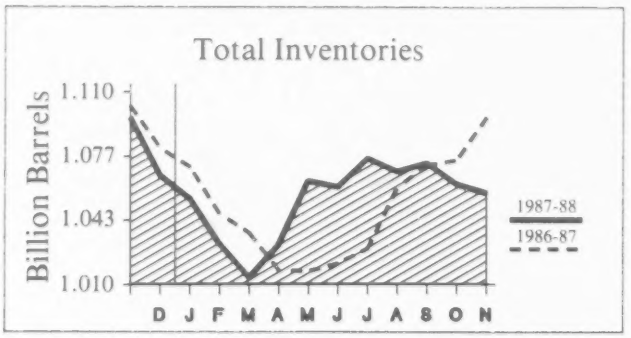
Thus, on a days supply basis, no [illegible] U.S. stocks. In fact, for the previous five Novembers, total inventories have represented from 67 to 73 days of total deliveries. Even adjusting November's days-of-supply calculation for the distortion caused by unusually strong deliveries, the month's stocks still represent a days supply figure in the low 60s.

Crude oil stocks rose only slightly in November. Refineries' emphasis on gasoline, combined with record imports of gasoline and components, helped to raise gasoline stocks by nearly 5 million barrels despite strong deliveries. Even so, gasoline inventories ended the month 6 million barrels lower than one year earlier. Distillate stocks held steady during November, ending the month at about the same level as a year ago—though deliveries data imply an inventory build at the nonprimary level, inventories not measured in API or Department of Energy data.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 559 million barrels as of November 30, 1988).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	NOVEMBER			YEAR-TO-DATE		
	1988[1]	1987[2]	% Change	1988[3R]	1987[2]	% Change
Products Supplied:						
Total motor gasoline	7,412	7,151	3.6	7,343	7,202	2.0
Finished leaded motor gasoline*	1,146	1,562	(26.6)	1,352	1,755	(23.0)
Finished unleaded motor gasoline*	6,266	5,589	12.1	5,991	5,447	10.0
Naphtha-jet	220	221	(0.5)	212	207	2.4
Kerosine-jet	1,300	1,138	14.2	1,229	1,171	5.0
Distillate fuel oil	3,145	2,932	7.3	3,057	2,945	3.8
Residual fuel oil	1,406	1,205	16.7	1,295	1,249	3.7
All other oils[4]	4,425	4,020	10.1	4,152	4,062	2.2
Reclassified[5]	- 241	- 324	(25.6)	- 179	- 243	(26.3)
Total domestic products supplied	17,667	16,343	8.1	17,109	16,593	3.1
Exports	747	737	1.4	812	736	10.3
Total products supplied	18,414	17,080	7.8	17,921	17,329	3.4
Supply:						
Domestic production:						
Crude oil[6]	8,036	8,397	(4.3)	8,132	8,352	(2.6)
Natural gas liquids	1,614	1,637	(1.4)	1,610	1,593	1.1
Other supply[7]	657	811	(19.0)	1,034	841	22.9
Total domestic supply	10,307	10,845	(5.0)	10,776	10,786	(0.1)
Imports:						
Crude oil, total	5,299[10/]	4,916[10/]	7.8	4,989[10/]	4,604[10/]	8.4
Canadian	705	574	22.8	685	610	12.3
Other	4,594	4,342	5.8	4,304	3,994	7.8
Products, total	2,655	2,055	29.2	2,127	1,986	7.1
Residual fuel oil	729	568	28.3	564	557	1.3
Other	1,926	1,487	29.5	1,563	1,429	9.4
Total imports	7,954	6,971	14.1	7,116	6,590	8.0
Total supply	18,261	17,816	2.5	17,892	17,376	3.0
Stock change, all oils	- 153	+ 736	XXXX	- 29	+ 47	XXXX
Refinery Operations						
Input to crude oil distillation units	13,240	13,074	1.3	13,417	12,968	3.5
Operable capacity	15,922	15,888	0.2	15,916	15,615	1.9
Refinery utilization (%)[8]	83.2%	82.3%	1.1	84.3%	83.0%	1.6
Crude oil runs	13,089	12,981	0.8	13,264	12,821	3.5

Stocks (millions bbls.)	1988		1987[2]	% Change from ...	
	Nov. 30[9]	Oct. 31[9]	Nov. 30	Previous Month	Year Ago
Crude oil [10/]	338.1	336.7	363.6	0.4	(7.0)
Unfinished oils	111.8	109.2r/	101.9	2.4	9.7
Total motor gasoline**	219.1	214.1r/	225.2	2.3	(2.7)
Finished leaded motor gasoline*	38.4	38.2	53.5	0.5	(28.2)
Finished unleaded motor gasoline*	143.4	139.1r/	134.6	3.1	6.5
Naphtha-jet	6.6	6.5r/	7.0	1.5	(5.7)
Kerosine-jet	38.6	41.2	43.9	(6.3)	(12.1)
Distillate fuel oil	128.7	128.4	128.0	0.2	0.5
Residual fuel oil	42.5	40.6	50.0	4.7	(15.0)
All other oils	171.9	185.2r/	176.8	(7.2)	(2.8)
Total all oils	1,057.3	1,061.9r/	1,096.4	(0.4)	(3.6)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-September, U.S. Department of Energy, October-November, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.